

Translation

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PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SK03PCT7	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/000607	International filing date (day/month/year) 23 January 2003 (23.01.2003)	Priority date (day/month/year) 25 January 2002 (25.01.2002)
International Patent Classification (IPC) or national classification and IPC G02B 27/18, G02F 1/13, 1/13357		
Applicant SONY CORPORATION		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>2</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 08 July 2003 (08.07.2003)	Date of completion of this report 29 March 2004 (29.03.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP2003/000607

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-13 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 5 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____ 1,4 _____, filed with the letter of _____ 03 October 2003 (03.10.2003)
- ☒ the drawings:
 pages _____ 1-16 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

- These elements were available or furnished to this Authority in the following language _____ which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. _____ 2,3 _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP03/00607

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1, 4-5	YES
	Claims		NO
Inventive step (IS)	Claim	1	YES
	Claims	4-5	NO
Industrial applicability (IA)	Claims	1, 4-5	YES
	Claims		NO

2. Citations and explanations

Claims 4-5

Document 1: JP, 2000-9996, A (Minolta Co., Ltd.), 14 January, 2000 & US, 6231192, B1,
Document 2: JP, 11-258547, A (Minolta Co., Ltd.), 24 September, 1999 & US, 6193376, B1.

Documents 1 and 2 describe an image display device comprising a spatial light modulation element having a reflective electrode, an illumination optical system having a polarization element, an integrator having a plurality of elements arranged to form a matrix, and a light source, wherein the illumination light emitted from the light source falls at an angle on the spatial light modulation element via the polarization element and integrator and illuminates the spatial light modulation element, a projection lens forming an image of the spatial light modulation element, and a reflective surface so disposed in the vicinity of the rear end portion of the projection lens as to suppress the inclination angle of the illumination light flux emitted from the illumination optical system on the spatial light modulation element and avoid intersection with the modulated light flux reflected from the spatial light modulation element.

Document 3: JP, 2001-51232, A (Seiko Epson Corp.), 23 February, 2001 & US 2002/48000, A.

Document 4: JP, 2000-267044, A (Seiko Epson Corp.), 29 September, 2000 & US 2002/48000, A.

Documents 3 and 4 describe setting the aspect ratio of each element of the integrator so as to improve the illumination efficiency when the illumination light falls at an angle with respect to the surface exposed to illumination light.

Restricting the aspect ratio of each element of the integrator of the image display device of document 1 or document 2 to the direction of tilting the illumination light with respect to the spatial light modulation element is obvious to a person skilled in the art based on the descriptions of documents 3 or 4.

Claim 1

The invention described in claim 1 is neither described nor suggested in the documents cited in the ISR and any of the documents newly cited in the IPER.